

	Environmental Health and Safety Manual	
	Policy Number: EH&S 4-4	
Title: <b>Formaldehyde Safety</b>		
Effective Date: 10/94	Revision: 2/97	Number of Pages: 5

**PURPOSE:** To establish safe handling practices and use of formaldehyde and formalin.

**SCOPE:** University wide.

**DEFINITIONS:**

**Permissible Exposure Level (PEL)** - The level determined by OSHA to be safe when employees are exposed to an airborne contaminant for 8 hours a day, 40 hours a week. For formaldehyde, this level is 0.75 parts of formaldehyde per million parts of air (0.75 ppm).

**Short Term Exposure Level (STEL)** - The level determined by OSHA to be safe when employees are exposed to an airborne contaminant for any 15 minute period. For formaldehyde, this level is 2 parts formaldehyde per million parts of air (2 ppm).

**Action Level** - A concentration of 0.5 parts formaldehyde per million parts of air (0.5 ppm) calculated as an 8 hour time weighted average (TWA).

**PROCEDURES:**

**I. Training**

1. All employees who handle formaldehyde will be trained annually on the hazards of formaldehyde. This training will be conducted by the Department of Environmental Health and Safety. This training shall include:
  - a. A discussion of the contents of the OSHA regulation and the contents of the formaldehyde material safety data sheet.
  - b. The purpose for and a description of the medical surveillance program.
  - c. A description of the potential health hazards associated with exposure to

formaldehyde and a description of the signs and symptoms of exposure to formaldehyde.

- d. Instructions to immediately report to the supervisor the development of any adverse signs or symptoms that the employee suspects is attributable to formaldehyde exposure.
- e. A description of operations in the work area where formaldehyde is present and an explanation of the safe work practices appropriate for limiting exposure to formaldehyde in each job.
- f. The purpose for, proper use of, and limitations of personal protective clothing and equipment.
- g. Instructions for the handling of spills, emergencies, and clean-up procedures.
- h. An explanation of the importance of engineering and work practice controls for employee protection and any necessary instruction in the use of these controls.
- i. A review of emergency procedures including the specific assignments of each employee in the event of an emergency.

## **II. Labeling Containers of Formaldehyde**

1. All containers of formaldehyde, at any concentration, must be labeled. This label must include, at a minimum:

Formaldehyde  
CAUTION:  
Respiratory Sensitization  
Potential Cancer Hazard  
May Cause Eye Damage

2. If the container also has a specimen or other potentially infectious material, it must also be labeled "BIOHAZARD".
3. Containers must be kept closed at all times to reduce the formaldehyde vapors in the air.

-Rev. 2/97-

### **III. Monitoring**

1. Initial monitoring will be performed in areas where there is the potential for employees to be exposed at or above the Action Level or at or above the STEL.
2. This monitoring will be repeated each time there is a change in production, equipment, process, personnel or control measures which may result in new or additional exposure to formaldehyde.
3. If the initial monitoring determines that the employee is exposed at or above the Action Level, monitoring will be repeated at least every 6 months.
4. If the initial monitoring determines that the employee is exposed at or above the STEL, monitoring will be repeated at least once a year under worst conditions.
5. Within 15 days of receiving the results, the Department of Environmental Health and Safety will notify the affected employees and supervisors of the results.

### **IV. Regulated Areas**

1. Areas where the concentration exceeds the PEL or the STEL, signs will be posted at all entrances with the following information:

DANGER  
Formaldehyde  
Irritant and Potential Cancer Hazard  
Authorized Personnel Only

2. Only persons who have been trained as described above, will be allowed access to these areas.

### **V. Personal Protective Equipment**

1. Nitrile gloves must be worn when handling 37% or greater concentration of formaldehyde, or when immersion of the hands is anticipated. Latex gloves can be used with 10% buffered formalin when there is minimal splash potential and immersion of the hands is not anticipated.

-Rev. 2/97-

2. Protective eyewear with sideshields, or a faceshield with protective eyewear, must be worn when formaldehyde is being poured or when there is the potential for splashing.
3. If monitoring shows that the PEL or STEL is exceeded, the employee will be required to wear a full face respirator with formaldehyde cartridges, until the exposure levels can be reduced with engineering controls.
  - a. When air purifying respirators are used, the cartridges must be replaced after three (3) hours of use, or at the end of the workshift, whichever is sooner, unless the cartridge contains a NIOSH approved end-of-service indicator to show when breakthrough occurs.
4. There must be an emergency eyewash and shower in the immediate work area when there is the potential for splashing.

## **VI. Spills**

### **A. Small Spills**

1. If less than 20 to 30 cc (1 ounce) of formaldehyde spills, the employee can clean it up.
2. Nitrile gloves (37% formaldehyde) or double latex gloves (10% formalin) and protective eyewear must be worn when cleaning up the spill.
3. Clean the spill with an absorbent material.
4. Wash the area with copious amounts of water.
5. Place all contaminated disposable material in a double bag, labeled as above.

### **B. Large Spills**

1. If more than 20 to 30 cc of formaldehyde spills, employees are not to clean it up.
2. Immediately evacuate the area, and close any doors.

-Rev. 2/97-

3. Alert others not to enter the area.
4. Contact Public Safety at 333, and request the Department of Environmental Health and Safety Hazardous Materials Response Team.
5. Do not reenter the area until it has been monitored by the Department of Environmental Health and Safety.

## **VII. Medical Surveillance**

1. Medical surveillance is available for all employees exposed to formaldehyde at or above the Action Level or exceeding the STEL (annually), who develop signs and symptoms of overexposure to formaldehyde, and for all employees exposed to formaldehyde in emergencies.
2. If an employee requires medical surveillance, they are to contact the Center for Occupational and Environmental Medicine. If the employee has developed signs and symptoms related to formaldehyde exposure, they should go to the Emergency Department.
  - a. The examination shall include a medical and work history with emphasis on any evidence of upper or lower respiratory problems, allergic conditions, skin reaction or hypersensitivity, and any evidence of eye, nose, or throat irritation, and other elements considered appropriate by the examining physician.

### **INQUIRIES/REQUESTS:**

Environmental Health and Safety  
110 Suffolk Hall  
Zip 6200  
Main Office: 632-6410  
FAX: 632-9683

### **RELATED FORMS:**

-Rev. 2/97-

TITLE: <b>Formaldehyde Safety</b>	POLICY: <b>4-4</b>
-----------------------------------	--------------------

**RELATED DOCUMENTS:**

29 CFR 1910.1048 *Formaldehyde*

*Respiratory Protection*, Policy 7-2

-Rev. 2/97-